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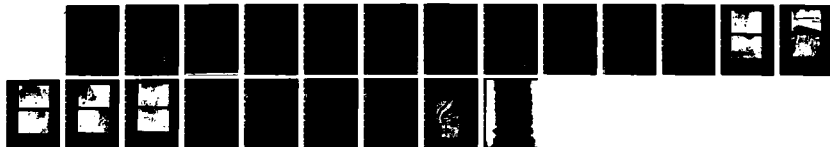
NATIONAL PROGRAM FOR INSPECTION OF NON-FEDERAL DAMS  
GARNISS POND DAM (CT. (U) CORPS OF ENGINEERS WALTHAM MA  
NEW ENGLAND DIV NOV 79

1/1

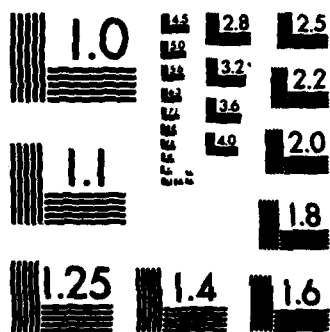
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AD-A143 062

EAST HAVEN, CONNECTICUT

(1)

GARNISS

GARNISS POND DAM  
CT-00114

DTIC FILE COPY

NATIONAL DAM INSPECTION PROGRAM  
CORPS OF ENGINEERS

DTIC  
ELECTRONIC  
JUL 12 1984  
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A

84 07 11 080

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SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

REPORT DOCUMENTATION PAGE		READ INSTRUCTIONS BEFORE COMPLETING FORM
1. REPORT NUMBER CT 00114	2. GOVT ACCESSION NO. (GRANISS) AD-A143062	3. RECIPIENT'S CATALOG NUMBER
4. TITLE (and Subtitle) East Haven, Conn. (Garniss) Pond Dam NATIONAL PROGRAM FOR INSPECTION OF NON-FEDERAL DAMS		5. TYPE OF REPORT & PERIOD COVERED INSPECTION REPORT
7. AUTHOR(s) U.S. ARMY CORPS OF ENGINEERS NEW ENGLAND DIVISION		6. PERFORMING ORG. REPORT NUMBER
9. PERFORMING ORGANIZATION NAME AND ADDRESS		8. CONTRACT OR GRANT NUMBER(s)
11. CONTROLLING OFFICE NAME AND ADDRESS DEPT. OF THE ARMY, CORPS OF ENGINEERS NEW ENGLAND DIVISION, NEDED 424 TRAPELO ROAD, WALTHAM, MA. 02254		10. PROGRAM ELEMENT, PROJECT, TASK AREA & WORK UNIT NUMBERS
14. MONITORING AGENCY NAME & ADDRESS (if different from Controlling Office)		12. REPORT DATE November 1979
		13. NUMBER OF PAGES 35
		15. SECURITY CLASS. (of this report) UNCLASSIFIED
		15a. DECLASSIFICATION/DOWNGRADING SCHEDULE
16. DISTRIBUTION STATEMENT (of this Report) APPROVAL FOR PUBLIC RELEASE: DISTRIBUTION UNLIMITED		
17. DISTRIBUTION STATEMENT (of the abstract entered in Block 20, if different from Report)		
18. SUPPLEMENTARY NOTES Cover program reads: Phase I Inspection Report, National Dam Inspection Program; however, the official title of the program is: National Program for Inspection of Non-Federal Dams; use cover date for date of report.		
19. KEY WORDS (Continue on reverse side if necessary and identify by block number) DAMS, INSPECTION, DAM SAFETY, East Haven, Conn. (Garniss) Pond Dam (GRANISS)		
20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The dam is an earthfill embankment approx. 600' intotal length. Graniss Street is located directly downstream. The height of the dam is taken from the outlet invert elevation to the crest elevation and is equal to 10+ ft. The crest width varies from 10+ ft. along most of the dam to 35+ ft. at the spillway. The apillway is a 10+ ft. wide channel at the left end of the dam. There is a concrete weir at the upstream end of the channel and another concrete weir at the outlet valve at the downstream end.		

84 07 11 080

This letter is to confirm instructions from the Corps that the Graniss Pond Dam has been reclassified to low hazard, and also to present our findings to date. ATT further work on the project shall be terminated. The following work has been completed:

- a. Data Collection
- b. Preparation for and the actual field inspection including survey.
- c. Partial preparation and plotting for drawings of the dam.

## Description of Project

The dam is an earthfill embankment approximately 600' in total length. Graniss Street is located directly downstream. The height of the dam is taken from the outlet invert elevation to the crest elevation and is equal to 10+ feet. The crest width varies from 10+ feet along most of the dam to 35+ feet at the spillway. The spillway is a 10+ foot wide channel at the left end of the dam. There is a concrete weir at the upstream end of the channel and another concrete weir with a 12 inch outlet valve at the downstream end. A stone wall is located along the right side of the channel. Water from the 12 inch outlet flows in a small open channel to a 15 inch RCP under Grannis Street.

The owner is the YMCA at 52 Howe Street, East Haven, Connecticut. The purpose of the dam is to provide a recreational pond for three camps located at the pond. The operator at the dam is Walter Allen, 4 Grannis Street, East Haven. There are no plans for the dam. According to the operator, the dam was built and owned by a Mr. Hubinger who donated the dam and property to the YMCA.

The dam impounds less than 1000 acre feet of water and the height of the dam is 10+ feet taken from the outlet invert to the top of the dam. According to recommended guidelines, the dam is classified as small in size. The dam has a low hazard classification based upon the impoundment capacity and discussions with the Corps which indicates that a breach of the dam would probably not cause loss of life or extensive property damage.

The findings of our visual inspection revealed that the condition of the dam is poor. The upstream weir is deteriorated and has fallen to a state of disrepair (Photo Page 3). The downstream weir has several areas of seepage at the downstream side (photo 5 and 6). The crest and slopes are overgrown with trees and brush (photos 1 and 2).

We are enclosing the following items:

1. Plans from survey done by Storch Engineers, 161 Main Street, Wethersfield, Connecticut
2. A map showing location of dam
3. Selected photographs with descriptions
4. Cahn Engineers visual inspection checklist
5. Inventory sheets compiled by Cahn Engineers, Inc.
6. The inventory sheet from State Board for the Supervision of Dams.
7. The Corps' inventory sheet
8. Other photographs of dam
9. Plotting of survey done by Cahn Engineers, Inc.
10. Notes from field inspection

We wish to express our appreciation for the cooperation of your staff in this matter and further appreciate the opportunity to be of continued service to the Corps of Engineers.

If you have any questions, please feel free to contact us.

Very truly yours,

CAHN ENGINEERS, INC.

*Peter M. Heynen*

Peter M. Heynen, P.E.  
Chief Geotechnical Engineer

PMH/na



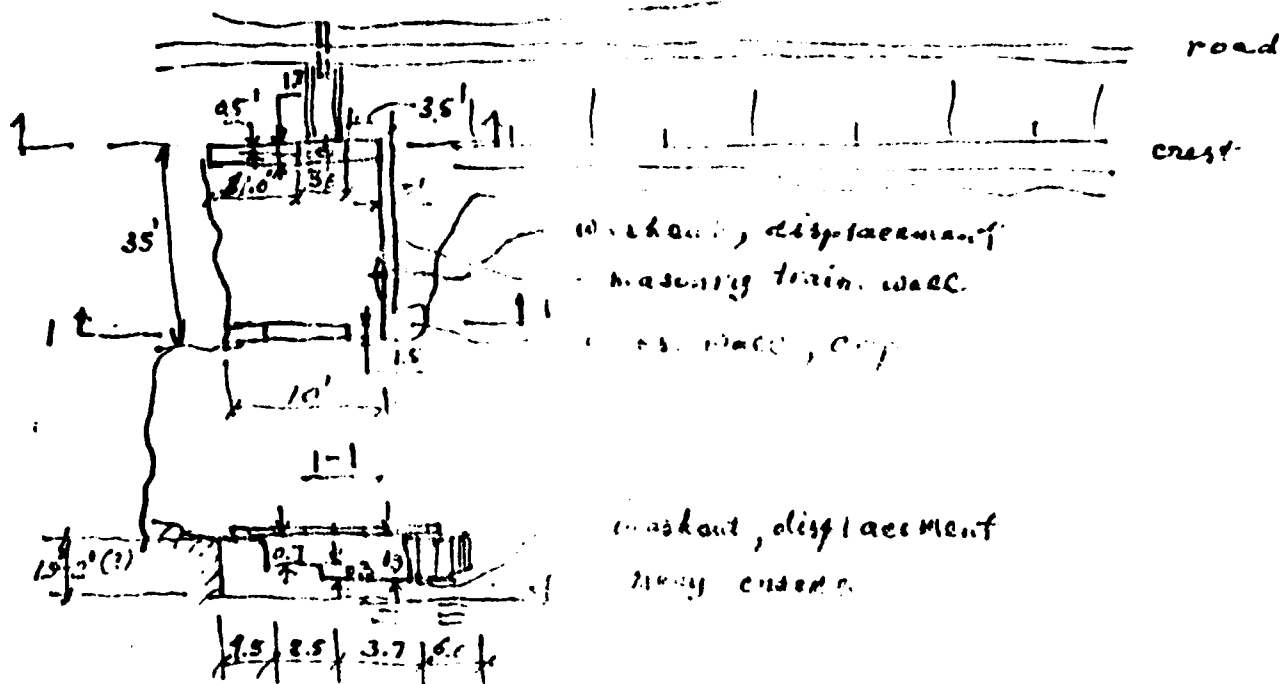
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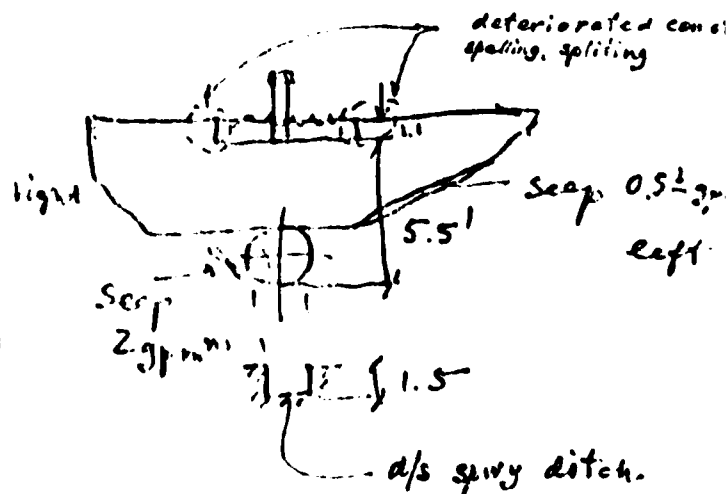
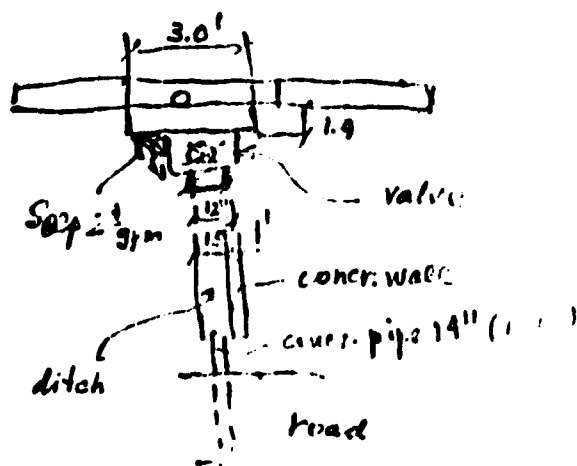
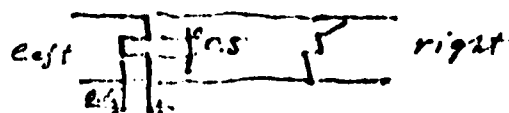
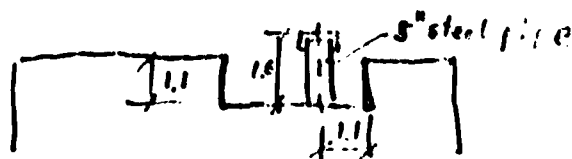
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Sunny, 75° F.



2-2.

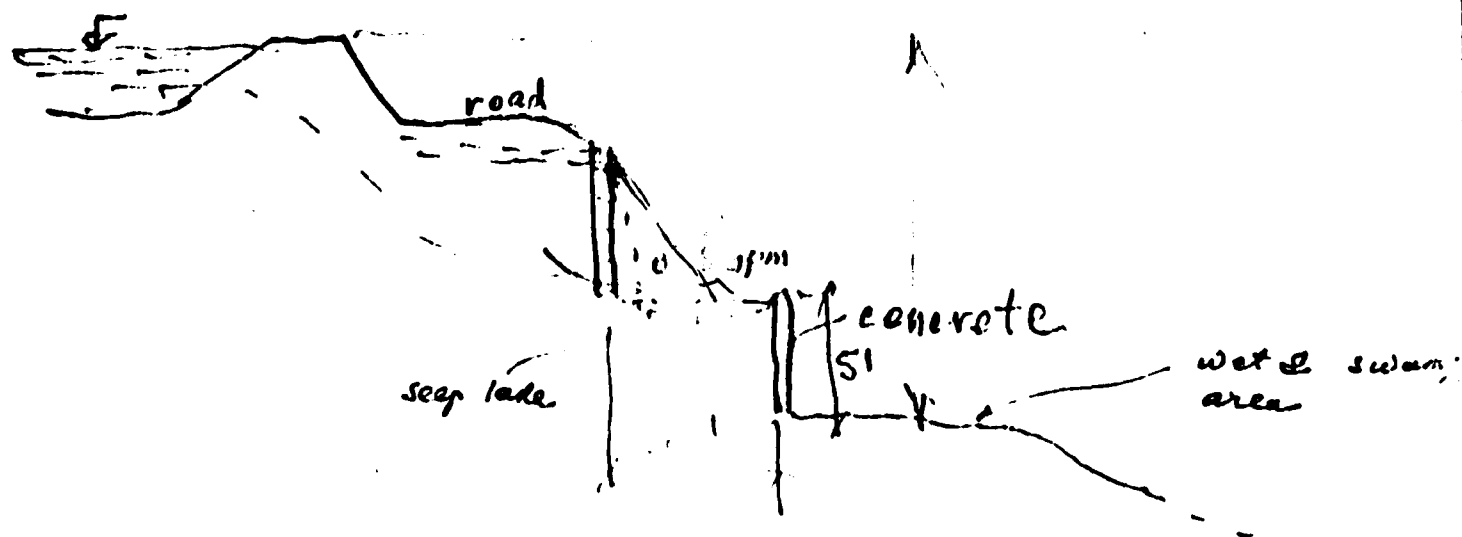
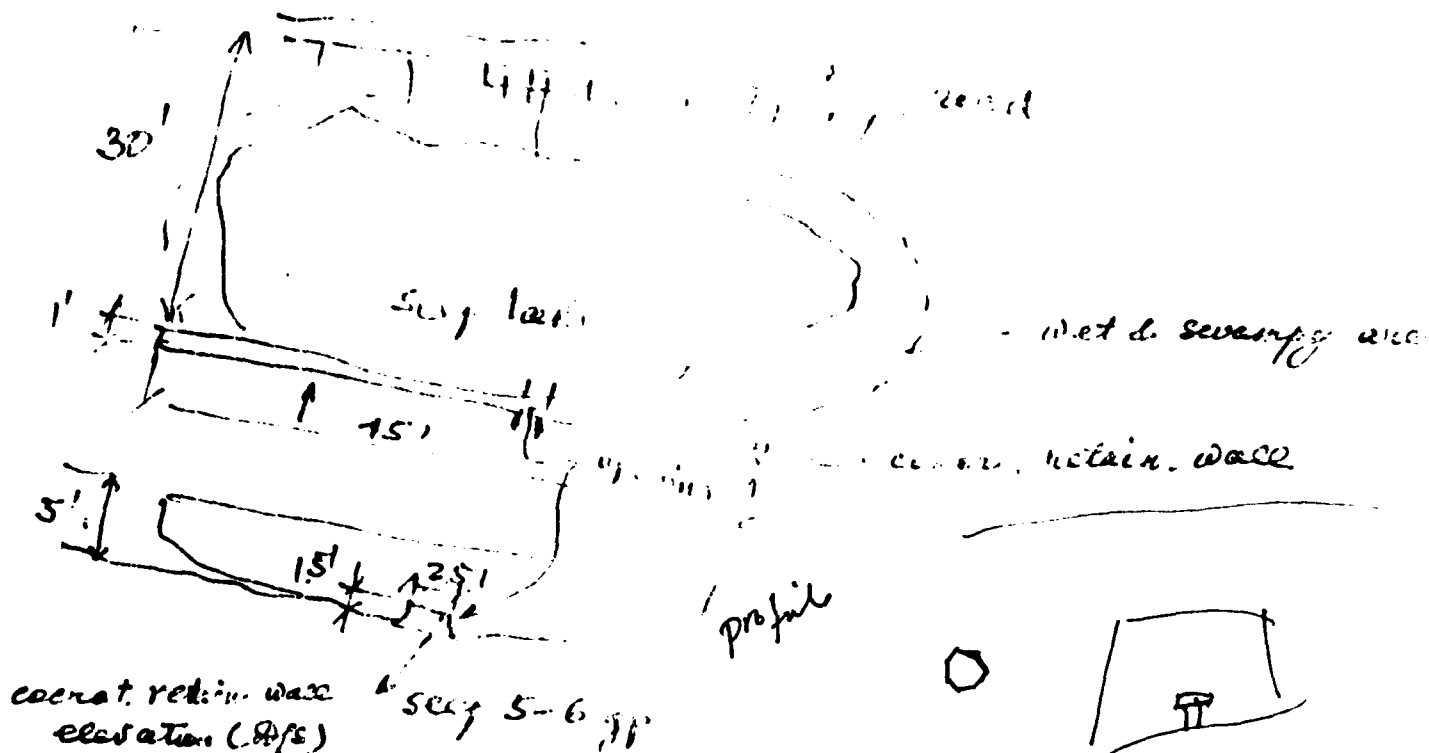




0.2 inches

(2)

See plan view



Stearns Pond Dam

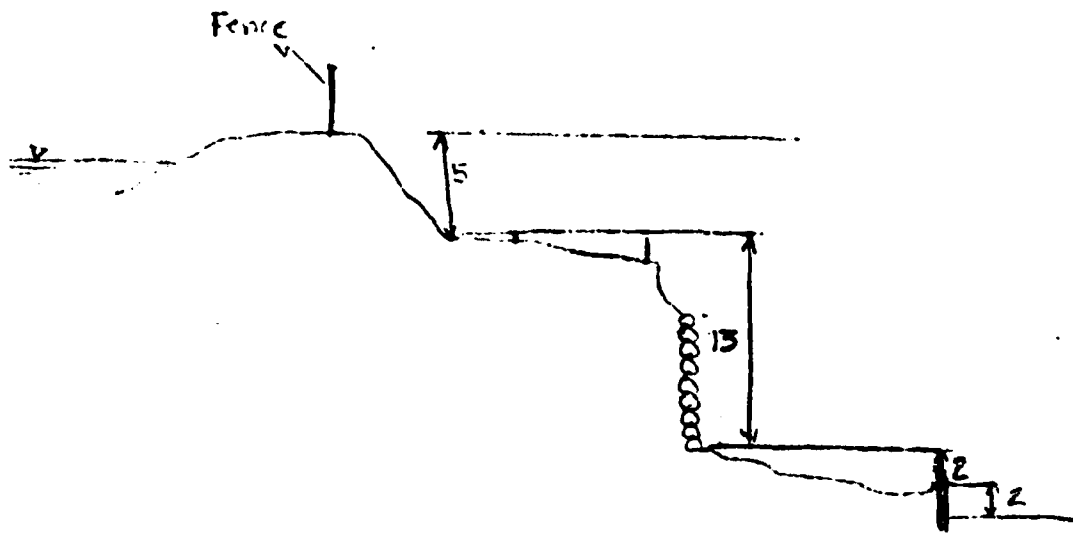
Owner: YMCA - East Haven 845-344-1111

Operator: Walter Allen 467-0031

- a) Operation / duties:
  - 12" valve (low level) - operable - d/s side dam
  - 6" runoff (top of dam)
  - no maintenance for valve
  - 15" R.C.F. under Grassy Street
  - Gates opened in anticipation of storms but not readily available in high water.
  - Valve kept closed except during spring thaw when its opened for 1 day max.
  - Operator at dam during storms - calls YMCA if a problem - no procedure for emergencies
  - No lake level readings
  - No seepage or flow monitoring
- f) No maintenance procedures
- g) 1<sup>st</sup> owner - Hukinger
  - 3 camps at pond
- h) Slots for flashboards but not used
- i) Dam not patrolled
- j) No maintenance for dam
- k)

## Grannis Pond Dam

1. Height of dam - 22' total



Minimum width w/s  $\approx 15'$  @ center of pond

Required by State Dept.

Right-of-way w/s of filling

New 15" RCP under Grannis St.

Under Grannis St. main

Installation of 24" - 3.0' RCP w/ splash pad

Impact area 400 sq. ft. d/s

No. EHV-3

WATER RESOURCES COMMISSION  
SUPERVISION OF DAMS  
INVENTORY DATA

Inventoried  
By WPS

Date 27 MAY 1964

Long 74-51.3

Lat 41-18.2

Name of Dam or Pond GRANISS POND (Lake Hubinger)

Code No. EH 2.7 FM 2.5 UOI

Nearest Street Location GRANISS STREET

Town EAST HAVEN

U.S.G.S. Quad. BRANFORD

Name of Stream UNNAMED TR FARM POND

Owner CAMP HUBINGER - YMCA

Address EAST HAVEN

965-3161

Thanks call back

OK 6/73

Pond Used For RECREATION DA 0.165M

Dimensions of Pond: Width 600 FEET Length 1400 FEET Area 20 ACRES

Total Length of Dam 600 FEET Length of Spillway 4 FEET

Location of Spillway EAST END OF DAM

Height of Pond Above Stream Bed 20 FEET SLOPES RAPIDLY

Height of Embankment Above Spillway 4 FEET

Type of Spillway Construction CONCRETE

Type of Dike Construction EARTH

Downstream Conditions NORTH HIGH STREET

Summary of File Data

Remarks TREES GROWING ON DIKE

Would Failure Cause Damage? YES Class B

CT-1.7

1900?

24 JAN 79

PAGE 19

## INVENTORY OF DAMS IN THE UNITED STATES

IDENTITY NUMBER	STATE	COUNTY	CITY	COUNTY DIST.	NAME	LATITUDE (NORTH)	LONGITUDE (WEST)	REPORT DATE DAY   MO   YR
1	CT	009	03		GRANISS POND DAM	0119.2	7251.3	12DEC73

POPULAR NAME	NAME OF IMPOUNDMENT
LAKE MURINGER DAM	GRANISS POND
RECORDS	
01 07	RIVER OR STREAM
	NEAREST DOWNSTREAM CITY - TOWN - VILLAGE
	EAST HAVEN
	DIST FROM DAM (MI.)
	POPULATION
	2
	25100

TYPE OF DAM	YEAR COMPLETED	PURPOSES	STAGE HEIGHT (FT.)	HYDRAULIC HEIGHT (FT.)	IMPOUNDING CAPACITIES (ACRE-FT.)	DIST OWN	FED R	PRV/FED	SCS A	VER/DATE
DICM	1900	R	24	22	220	200	NED			

REMARKS
22-ESTIMATE

D/S HAS LENGTH	SPILLWAY TYPE	MAXIMUM DISCHARGE (CFS)	VOLUME OF DAM (CU)	POWER CAPACITY (KW)	INSTALLED PROPOSED	NAVIGATION LOCKS
600	4				0	

OWNER	ENGINEERING BY	CONSTRUCTION BY
YMCA		

DESIGN	CONSTRUCTION	OPERATION	MAINTENANCE

INSPECTION BY	INSPECTION DATE DAY   MO   YR	AUTHORITY FOR INSPECTION

REMARKS



*Photo 1 - Crest of dam. Runoff pipe over crest in background.*



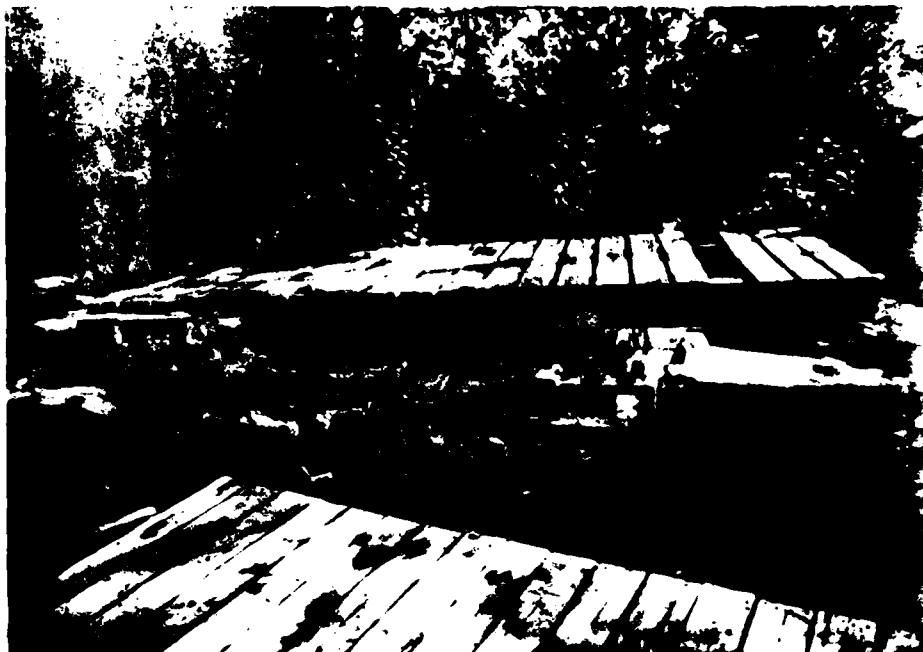
*Photo 2 - Downstream Slope of dam. Runoff (6") in center and Graniss Street in foreground.*

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WALTHAM, MASS.

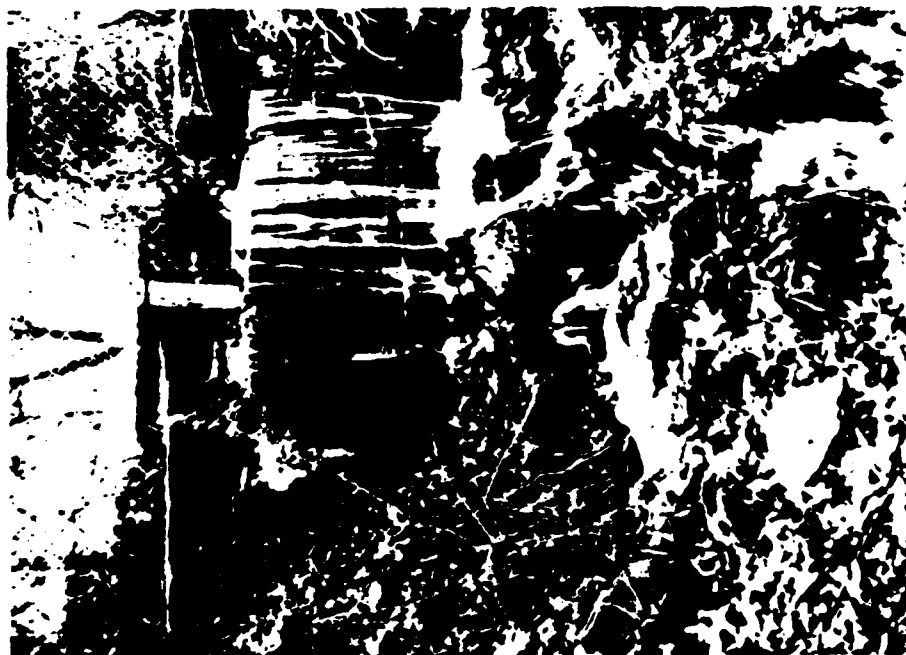
CAMN ENGINEERS INC.  
WALLINGFORD, CONN.  
ENGINEER

NATIONAL PROGRAM OF  
INSPECTION OF  
NON-FED. DAMS

Graniss Pond Dam  
TR-Farm River  
East Haven, Connecticut  
CE# 27 660 KD  
DATE 9/18/79 PAGE C-1



*Photo 3 - Upstream weir and spillway channel. Downstream weir in background.*



*Photo 4 - Downstream weir, outlet valve and channel to 15" R.C.P. from downstream.*

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CORPS OF ENGINEERS  
WALTHAM, MASS.

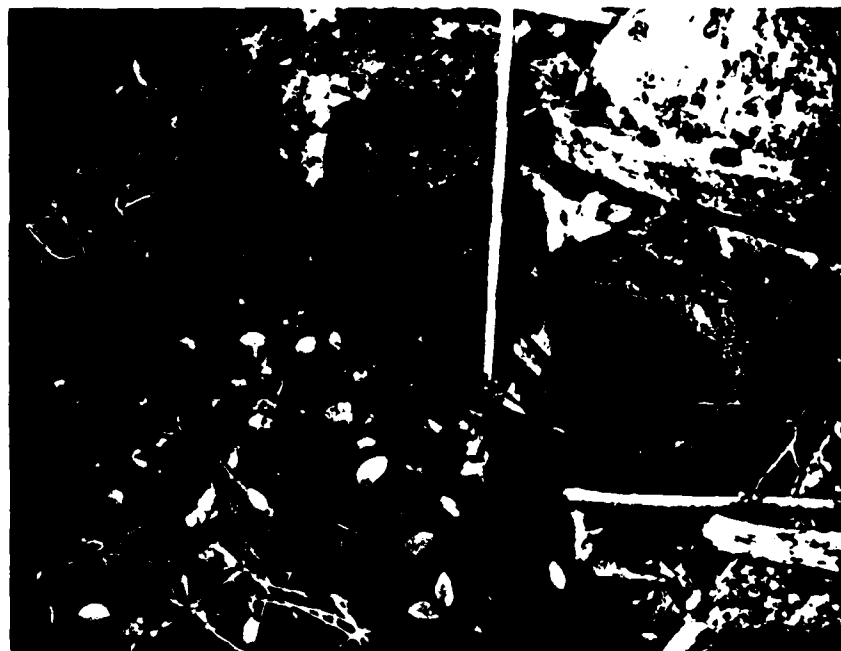
CAHN ENGINEERS INC.  
WALLINGFORD, CONN.  
ENGINEER

NATIONAL PROGRAM OF  
INSPECTION OF  
NON-FED. DAMS

Granias Pond Dam  
TR-Farm River  
East Haven, Connecticut  
SE# 27 660 KD  
DATE 9/18/79 PAGE C-2



*Photo 5- Seepage, efflorescence and cracking at downstream weir.*



*Photo 6 - 12" outlet valve below downstream weir. No seepage to left of valve opening.*

USA  
ENGINEER DIV. NEW ENGLAND  
PS OF ENGINEERS  
WALTHAM, MASS.

CAHN ENGINEERS INC.  
WALLINGFORD, CONN.  
ENGINEER

NATIONAL PROGRAM OF  
INSPECTION OF  
NON-FED. DAMS

*Graniss P*  
*TR-Farm*  
*East Haven*  
CE# 2766  
DATE 9/18/79





Photo 7 - Channel to 15" R.C.P. under  
Graniss Street. Valve stem in fore-  
ground.



Photo B - 15" R.C.P. outlet and riprap at downstream  
side of Graniss Street.

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CAHN ENGINEERS INC.  
WALLINGFORD, CONN.  
ENGINEER

NATIONAL PROGRAM OF  
INSPECTION OF  
NON-FED. DAMS

Graniss Pond Dam

TR - Farm River

East Haven, Connecticut

CE# 27-660 KD

DATE 9/18/79 PAGE C-4



*Photo 9 - Stone wall at downstream side of Graniss Street.*



*Photo 10 - Ponded water and concrete retaining wall at downstream side of Graniss Street.*

US ARMY ENGINEER DIV. NEW ENGLAND  
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WALTHAM, MASS.

CANN ENGINEERS INC.  
WALLINGFORD, CONN.  
ENGINEER

NATIONAL PROGRAM OF  
INSPECTION OF  
NON-FED. DAMS

Graniss Pond Dam  
TR - Farm River  
East Haven, Connecticut  
SE# 27 660 KD  
DATE 9/10/79 PAGE C-5

VISUAL INSPECTION CHECK LIST  
PARTY ORGANIZATION

A-1

PROJECT Graniss Pond Dam

DATE: 9/18/79

TIME: 1:15 P.M. - 1:00 P.M.

WEATHER: Sunny - warm - 75°F

W.S. ELEV. \_\_\_\_\_ U.S. \_\_\_\_\_ DN.S \_\_\_\_\_

PARTY:

INITIALS:

DISCIPLINE:

1. <u>Jay Costello</u>	<u>J.C.</u>	<u>Cohn Engineers, Inc.</u>
2. <u>Peter M. Heynen</u>	<u>P.M.H.</u>	<u>Cohn Engineers, Inc.</u>
3. <u>Miron Petrovsky</u>	<u>M.P.</u>	<u>Cohn Engineers, Inc.</u>
4. <u>Bob Jahn</u>	<u>B.J.</u>	<u>Cohn Engineers, Inc.</u>
5. <u>Hector Moreno</u>	<u>H.M.</u>	<u>Cohn Engineers, Inc.</u>
6. _____	_____	_____

PROJECT FEATURE

INSPECTED BY

REMARKS

1. <u>Dam Embankment</u>	<u>P.M.H., J.C., M.P., B.J., H.M.</u>	
2. <u>Spillway channel</u>	<u>P.M.H., J.C., M.P., H.M.</u>	
3. <u>Upstream weir</u>	<u>P.M.H., J.C., M.P., B.J.</u>	
4. <u>Downstream weir</u>	<u>P.M.H., J.C., M.P., B.J.</u>	
5. _____		
6. _____		
7. _____		
8. _____		
9. _____		
10. _____		
11. _____		
12. _____		

## PERIODIC INSPECTION CHECK LIST

Page A-2PROJECT Graniss Pond DamDATE 9/18/79PROJECT FEATURE Dam EmbankmentBY P.M.H., J.C., M.P., H.M.

AREA EVALUATED	CONDITION
<u>DAM EMBANKMENT</u>	
Crest Elevation	203 ± } C.E datum
Current Pool Elevation	202 ± } top of valve stem = 200.00
Maximum Impoundment to Date	Unknown
Surface Cracks	none observed
Pavement Condition	N/A
Movement or Settlement of Crest	none observed
Lateral Movement	none observed
Vertical Alignment	} good
Horizontal Alignment	
Condition at Abutment and at Concrete Structures	
Indications of Movement of Structural Items on Slopes	none
Trespassing on Slopes	some
Sloughing or Erosion of Slopes or Abutments	some erosion from trespassing
Rock Slope Protection-Riprap Failures	displacement and vegetation
Unusual Movement or Cracking at or Near Toes	none
Unusual Embankment or Downstream Seepage	seepage and ponded water below road. Also in vicinity of 6" runoff pipe.
Piping or Boils	
Foundation Drainage Features	N/A
Toe Drains	N/A
Instrumentation System	N/A

## PERIODIC INSPECTION CHECK LIST

Page A-3PROJECT Graniss Pond DamDATE 9/18/79PROJECT FEATURE Spillway weirs and ChannelBY J.C. M.P. PMH

AREA EVALUATED	CONDITION
<u>OUTLET WORKS-SPILLWAY WEIR, APPROACH AND DISCHARGE CHANNELS</u>	<u>u/s weir, channel, d/s weir</u>
a) <u>Approach Channel</u>	
General Condition	poor - needs dredging
Loose Rock Overhanging Channel	none - right channel wall decay
Trees Overhanging Channel	none
Floor of Approach Channel	not observed
b) <u>Weir and Training Walls</u>	→ two weirs
General Condition of Concrete	u/s - very poor d/s - fair
Rust or Staining	none observed
Spalling	u/s - total collapse d/s - some
Any Visible Reinforcing	none
Any Seepage or Efflorescence	d/s - at base
Drain Holes	none observed
c) <u>Discharge Channel</u>	
General Condition	poor
Loose Rock Overhanging Channel	none
Trees Overhanging Channel	yes
Floor of Channel	debris in channel
Other Obstructions	N/A

# PERIODIC INSPECTION CHECK LIST

Page A-4

PROJECT Graniss Pond Dam

DATE 9/18/79

PROJECT FEATURE \_\_\_\_\_

BY J.C. M.P., P.M.H.

AREA EVALUATED		CONDITION
<u>OUTLET WORKS-OUTLET STRUCTURE AND OUTLET CHANNEL</u>		
General Condition of Concrete		12" low level valve d/s side
Rust or Staining		d/s weir
Spalling		poor
Erosion or Cavitation		efflorescence
Visible Reinforcing		some
Any Seepage or Efflorescence		cracking
Condition at Joints		none observed
Drain Holes		base of weir and at valve
Channel		opening
Loose Rock or Trees Overhanging Channel		N/A
Condition of Discharge Channel		some trees
		rocks and debris in channel
		between weir and 15" R.C.P.
		R.C.P. empties to d/s slope road
		embankment. Some riprap.



Salpord Quad.

END

FILMED

8

DNIC











